

b) Amendments to the Claims

Kindly amend claim 7 as follows. A complete listing of all the claims that are or were in the application follows.

--1. (Withdrawn) A vacuum deposition system comprising a film-forming chamber to be kept at a stated degree of vacuum, and provided therein a substrate holder which holds a substrate and a vapor-generating means which generates a vapor of a deposition material which is to be vacuum-deposited on the surface of the substrate to come into a thin film, the system further comprising:

a reaction chamber provided therein with an ionization means which ionizes by the plasma a source gas for compensating atoms coming short in the thin film; and

a communicating portion which makes the inside of the film-forming chamber and the inside of the reaction chamber communicate with each other and has a pressure control means which controls differential pressure between the film-forming chamber and the reaction chamber.

2. (Withdrawn) The vacuum deposition system according to claim 1, which comprises a microwave-generating means for introducing microwaves into the reaction chamber.

3. (Withdrawn) The vacuum deposition system according to claim 1, which comprises a high-frequency power source for supplying a high-frequency power into the reaction chamber.

4. (Withdrawn) The vacuum deposition system according to claim 1, wherein the pressure control means is a pressure control valve.

5. (Withdrawn) The vacuum deposition system according to claim 1, which comprises a gas feed means for feeding the source gas into the reaction chamber.

6. (Withdrawn) The vacuum deposition system according to claim 5, wherein the gas feed means is a means for feeding into the reaction chamber at least one of oxygen gas and the fluorine gas as the source gas.

7. (Currently Amended) A thin-film deposition process which forms a thin fluoride film by means of a vacuum deposition system comprising a film-forming chamber to be kept at a stated degree of vacuum, and provided therein a substrate holder which holds a substrate and a vapor-generating means which generates a vapor of a fluoride deposition material which is to be vacuum-deposited on the surface of the substrate to form come-into a thin fluoride film, said vapor subject to scattering during vacuum deposition which reduces said film quality, the system further comprising a reaction chamber provided therein with an ionization means which ionizes by the plasma a source gas containing fluorine gas to form a plasma for remediating

defects for compensating atoms coming short in the thin film caused by deposition of scattered vapor; and

a communicating portion which makes the inside of the film-forming chamber and the inside of the reaction chamber communicate with each other and has a pressure control means which controls differential pressure between the film-forming chamber and the reaction chamber, the process comprising the steps of:

ionizing the source gas containing fluorine gas in the reaction chamber and thereafter opening the pressure control means of the communicating portion to introduce the an ionized source gas containing fluorine gas into the film-forming chamber; and

generating the a vapor of the fluoride deposition material in the film-forming chamber to form the thin fluoride film.

8. (Original) The thin-film deposition process according to claim 7, wherein the film-forming chamber is kept at an internal pressure of 13 mPa or less, and the reaction chamber is kept at an internal pressure of from 0.3 Pa to 7 Pa.--